This point was again emphasised in the report presented by the Committee on Progress in Lamps and Lighting Appliances, which described efforts being made to effect standardisation of lamps and fittings. Amongst other recent steps ten standard types of lamps suitable for automobile headlights, meeting the requirements of practically all British cars, have been evolved. Mr. L. E. Buckell showed some of the very large gas-filled electric lamps consuming 3000-4000 watts and other types with filaments specially designed for projector work. A new feature was the process for spraying bulbs with finely divided china clay; this gives a soft light and good diffusion, with an absorption estimated not to exceed 7 per cent. The sprayed surface is said to have good wearing properties, and it is believed that these lamps will prove useful in cases where they are unavoidably exposed to view in the direct range of vision and yet it is desirable to avoid glare. Miss Beatrice Irwin gave a demonstration of the colour filter system associated with her name, a variety of lighting units consisting of cylinders of hand-painted parchment paper in pleasing combinations of colours being shown.

LEAFLET R. 58 received from Messrs. Newton and Wright, Ltd., 471-3 Hornsey Road, N.19, describes the "Harley" unit for dental radiology. The chief feature of the apparatus is in the movements of the X-ray tube, which is a very important feature in practice. Flexibility is here combined usefully with rigidity, and arrangements are made which allow of stereoscopic radiographs being taken. The high-tension transformer is oil-immersed, and when in action one pole is earthed; a separate transformer with the necessary adjustments for the control of the filament current of the Coolidge tube is supplied. In order to vary the penetration of the X-rays, four alternative voltages may be applied to the tube terminals. This appears to be an ample margin for the requirements of dental radiology.

MESSRS. C. F. CASELLA AND CO., LTD., 49 and 50 Parliament Street, London, S.W.1, have issued a new catalogue, No. 523, which contains particulars and illustrations of a very wide range of surveying and drawing instruments and appliances. Detailed specifications are given of the more important instruments manufactured by the firm. In the design of several of these, many improvements are embodied, which either give some additional facility to the user or increase the accuracy or length of life of the instrument. A notable addition to the list is the new double-reading micrometer theodolite, which has been designed for geodetic and exploration purposes where accuracy of the highest order is desired. In this instrument the diametrical points of the circle are brought together in one field by an optical arrangement. It is therefore possible to set the telescope on the object, take the readings of the bubbles and all four readings of the circle without moving from the front of the instrument. The length of time spent in taking a set of readings is thus considerably reduced. This improvement is accompanied by a reduction in the number of parts employed, and the possibility of the instrument being put out of adjustment is thereby diminished.

Our Astronomical Column.

REINMUTH'S COMET, 1923B.—The following two observations, both made at Königstuhl, are now to hand, the positions being referred to 1923·0:

	G.M.T.	R.A.	N. Decl.
Oct.	$31^d\ 9^h\ 22{\cdot}1^m$	$1^h\ 15^m\ 11{\cdot}36^s$	22° 26′ 36·0″
Nov.	5 8 15·1	1 17 50·90	19 47 23·2

Mr. Waterfield states, as the result of an unsuccessful visual search, that the object is certainly fainter than the 11th magnitude. This faintness is probably the reason of the delay in obtaining a third observation.

THE NOVEMBER LEONIDS.—Mr. W. F. Denning writes: "Very stormy, unsettled weather prevailed during the most of the period when the return of the November meteors was expected, and it was not possible to watch for the shower on several consecutive nights. Mr. I. P. M. Prentice, of Stowmarket, endeavoured to obtain an early observation of the shower on November 10. For that purpose he carried out a long watch of the heavens commencing at 5.55 G.M.T. and ending at 17.55 G.M.T. He recorded 82 meteors though the sky was partly cloudy at times. Six of the meteors seen were Leonids with a radiant point apparently at 145°+22°. If this position for the radiant is confirmed it will indicate that the Leonid radiant, similarly to that of the great Perseid shower of August, is a movable position which advances about 1° per day. On November 11, Mr. Prentice saw 35 meteors, but the sky became cloudy before 14.50 G.M.T. and watching had to be discontinued. At 12.38 G.M.T. he saw a bright fireball directed from a shower of Taurids. It would be interesting to get another observation of this if other observers happened to be looking for Leonids on the night of November 11 at about 12.38 G.M.T."

THE EXTRAFOCAL METHOD OF STUDYING MAGNITUDES.—The advantages of this method are the practical equalisation of the size of disc for different magnitudes and elimination of the effect of peculiarities of images arising from defects in the objective. The quantity measured is simply the density of the image. Mr. Edward S. King (Proc. Nat. Acad. Sciences, U.S.A., Oct. 1923) communicates the results for 100 bright stars from Harvard observations. A yellow screen and isochromatic plates were used, thus giving photovisual magnitudes. The mean excess of the resulting magnitudes over the photometric ones is as follows: B −0·02, Ao 0·00, F −0·10, G −0·15, K −0·16, M −0·20. The following colour-indices were deduced: Bo −0·23, Ao −0·02, Fo +0·25, Go +0·88, Ko +1·28, M +1·87. These are independent of visual observations.

A rediscussion of the observations of Nova Aquilæ, 1918, when near its maximum brilliance, gives colour-index −0·19, instead of −0·35, published earlier. Mr. King also measured the colour-indices of the planets by the same method. The values are: Venus +0·91, Mars +1·45, Jupiter +0·96, Saturn (without rings) +1·22, Uranus 0·74. These accord well with the ruddy colour of Mars and the "sea-green" of Uranus.

The paper also contains new formulæ for the effect of phase-angle on the magnitudes.